

Amendments to the Drawings:

Figure 2 has been amended to show the feature of original claim 20.

## REMARKS

By this Amendment, Applicants have amended Figure 2 to show the feature recited in original claim 20, i.e., that the seal comprises a temperature-sensitive element. Amended Figure 2 is supported original claim 20, original Figure 2 and the disclosure at page 4, line 13 of Applicants' specification. Applicants have also amended page 10 of the specification to provide a description of amended Figure 2. The reference to the patent application at page 12, line 14 of Applicants has been corrected and updated.

Applicants have also amended the claims to more clearly define their invention. In particular, claim 1 has been amended to clarify that the housing is provided within the seal in the housing, which is open in the direction of the chamber, is surrounded by the seal in all other directions. See, e.g., the figures, e.g., Figures 1 and 2, and the description thereof in Applicants' specification. The claims have also been amended to delete the reference numerals therefrom. Claims 21-23 have been amended to positively set forth a method step. Claims 24-27 have been added to define further aspects of the present invention. See, e.g., Figures 1 and 3-6.

In view of the foregoing amendments to Figure 2, reconsideration and withdrawal of the objection to the drawings in numbered section 1 of the Office Action are requested.

In view of the foregoing amendments to page 12, line 14 of the specification, reconsideration and withdrawal of the objection to the disclosure in numbered section 2 of the Office Action are requested.

In view of the foregoing amendments to claims 21-23, reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. 112, second paragraph, are requested.

Claim 23 stands rejected under 35 U.S.C. 112, first paragraph. In support of this rejection, it has been urged by the Examiner that it is not clear how to measure the “engine knock location in the combustion chamber of an internal-combustion engine.” However, such is known to those skilled in the art based on French patent application number 00/14,05, filed October 31, 2007, corresponding to U.S. patent application number 09/984,832, filed October 31, 2001, published as U.S. 2002/0050162 A1, as indicated at page 12, lines 13-14 of Applicants’ specification. Since the specification is directed to those skilled in the art and since those skilled in the art would understand how to measure the engine knock location based on the document cited in Applicants’ specification, Applicants submit the specification provides an enabling disclosure to those skilled in the art. Therefore, claim 23 is supported by an enabling disclosure.

Claims 1-6, 10-15 and 19-23 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 5,659,132 to Novak et al. Applicants traverse this rejection and request reconsideration thereof.

The present invention relates to a device for measuring at least the pressure of a fluid present in a chamber and to methods of using such a device. As shown by way of example only in the figures (see, e.g., Figures 1-2), the device includes a sensitive element 36 placed in a housing 38 provided within a seal 10 interposed between two elements 12, 14, forming the chamber 16. The housing 38 is opened in the direction of the chamber 16 but surrounded by the seal 10 in all other directions. The sensitive element 36 is coated with a material 67 filming the housing 38. Such is neither disclosed by nor obvious over Novak et al.

The Examiner refers to Figure 4 of Novak et al., which shows an engine block 402 and cylinder head 401 defining a combustion chamber 403. An annular support structure 302 includes a number of sensors 301 whose signal outputs are delivered via signal cables 406, via connector assemblies 305. The sensors 301 are sealed into the support structure 302 using high temperature resin or by other appropriate sealing methods. The gasket 303 is interposed between the block and the head and is equipped with connectors 410 that meet with connectors 409 provided on each sensor.

In Figure 4 of Novak et al., the annular mounting structure 302 (which the Examiner refers to as a housing) is not provided within the gasket 303, but is attached thereto via connector assembly 305. Moreover, Figure 4 of Novak et al. does not disclose a housing opening in the direction of the chamber 403 and surrounded by the gasket 303 in all other directions. The other embodiments of Novak et al. also do not disclose a housing opened in the direction of the chamber and surrounded by the gasket in all direction. It is submitted there is no apparent reason to modify the teachings of Novak et al. to arrive at the presently claimed invention. Accordingly, the Novak et al. patent does not disclose and would not have rendered obvious the presently claimed invention.

Claims 7, 8 and 16-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Novak et al. and further in view of Japanese patent application publication number JP 2-157629 to "Danno." Applicants traverse this rejection and request reconsideration thereof.

The Examiner has cited the "Danno" publication as allegedly teaching an in-cylinder pressure sensor with a protective element and comprising a piezoelectric element and in connection with its teachings of the electrical connection means.

However, clearly nothing in Danno would have remedied any of the deficiencies noted above with respect to Novak et al. Accordingly, the presently claimed invention is patentable over the proposed combination of references, at least for the reasons noted above.

Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Novak et al. and further in view of U.S. Patent No. 5,380,014 to Schaperkottter. Applicants traverse this rejection and request reconsideration thereof.

The Examiner has cited the Schaperkottter patent for its teachings in connection with the use of a conducting glue to connect a sensitive element to a metallic contact element. However, clearly nothing in the Schaperkottter patent remedies any of the deficiencies noted above with respect to Novak et al. Accordingly, claim 9 is patentable over the proposed combination of references, at least for the reasons noted above.

Claims 1, 6-19 and 21-23 stand rejected under 35 U.S.C. 102(b) as being anticipated by DE 42 07 495 to Gurich et al. Applicants traverse this rejection and request reconsideration thereof.

The undersigned has been advised that the Gurich et al. patent is directed to a device for detecting an abnormal combustion in the combustion chamber. The device comprises a sealing member 12 with an opening 13 corresponding to the combustion chamber. A measuring element 10 is incorporated into a housing (circular groove) located on the edge of the opening and covered by a protection element in form of U. As described in column 3, lines 47 to column 4, line 5, a sealing material 52 or 62 or 72 is located between the sealing member and in one hand the cylinder block 14 and in the other hand the cylinder head. This document does not disclose a material filling the housing as presently claimed.

Accordingly, it is submitted the Gurich et al. document does not anticipate the presently claimed invention

Applicants note the Examiner has cited a number of documents as being pertinent to applicants' disclosure. However, since none of these documents has been applied in rejecting the claims formerly in the application, further discussion of these documents is deemed unnecessary.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 612.44330X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

/Alan E. Schiavelli/

Alan E. Schiavelli

Registration No. 32,087

AES/at  
(703) 312-6600